

## IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claim 3 and CANCEL claims 1, 2, 5, 6, 7 and 10 without prejudice or disclaimer in accordance with the following:

1. (cancelled)

2. (cancelled)

1. (currently amended) An optical path cross-connect device for accommodating an inter-office transmission line for transferring wavelength-multiplexed optical signals and a plurality of intra-office transmission lines for transferring a wavelength-non-multiplexed optical signal, comprising:

an optical branching unit provided with said inter-office transmission line, for branching the wavelength-multiplexed optical signals entered from said inter-office transmission line into "m (symbol "m" being an integer and also being larger than 1) " pieces of first optical path groups, while maintaining ~~the~~ wavelength-multiplexed state;

an intra-office signal input unit provided with said intra-office transmission lines, for repeating the wavelength-non-multiplexed optical signal entered from each of said intra-office optical transmission lines;

"m" pieces of routing units for routing an optical signal within a pre-allocated wavelength range from optical signals outputted from said optical branching unit and said intra-office signal input unit to an intra-office signal output unit, and for converting said optical signal within said pre-allocated wavelength range into a desirable wavelength to route a wavelength-converted optical signal to a second optical path group, said "m (symbol "m" being an integer and also being larger than 1) " pieces of routing units being subdivided in a unit of at least "n (symbol "n" being an integer and also being larger than 1)" wavelengths as wavelength ranges to be processed by the respective routing unit are different from each other;

an optical combining unit for accommodating thereinto said second optical path group and for selectively wavelength-multiplexing said wavelength-converted optical signal; and

an intra-office signal output unit for accommodating therein said second optical path group and for selectively repeating said wavelength-converted optical signal,

wherein:

said intra-office signal input unit is constituted by an optical space switch; said routing unit is arranged by a wavelength-division demultiplexer, an optical space switch, a wavelength converter and a wavelength-division multiplexer; and said intra-office signal output unit is arranged by an optical space switch.

sub  
# 1  
2  
3  
4

(previously presented) An optical path cross-connect device as claimed in claim

wherein:

the optical signal transferred to said intra-office transmission line is wavelength-multiplexed; and both said

intra-office signal input unit and said intra-office signal output unit repeat the wavelength-multiplexed optical signal.

5. (cancelled)
6. (cancelled)
7. (cancelled)

3.  
8. (previously presented) An optical path cross-connect device as claimed in claim  
wherein:

said intra-office signal input unit is arranged by a wavelength-division demultiplexer and an optical space switch; said routing unit is constituted by a wavelength-division demultiplexer, an optical space switch, a wavelength converter and a wavelength-division multiplexer; and said intra-office signal output unit is arranged by an optical space switch, a wavelength converter and a wavelength-division multiplexer.

9. (cancelled)
10. (cancelled)

4.  
11. (previously presented) An optical network wherein:

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*2nd* *concl.* E a plurality of the optical path cross-connect devices as claimed in claim <sup>1</sup>/<sub>2</sub> are employed so as to constitute said optical network.

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#14/E

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Darleen Stockley on 2/17/04.

IN THE CLAIMS

2. a) In claim 3, the phrase "the wavelength" in line 8, has been changed to --- wavelength ---.  
b) In claim 3, the phrase "optical.signal" in line 14, has been changed to ---optical signal---.  
c) Claim ~~1~~<sup>2</sup> has been changed to -- an optical path cross-connect device as claimed in claim

<sup>1</sup>/<sub>1</sub>, wherein: the optical signal transferred to said intra-office transmission lines is wavelength-multiplexed; and both said intra-office signal input unit and said intra-office signal output unit repeat the wavelength-multiplexed optical signal ---.

- d) In claim 11, the phrase "the optical path" in line 2, has been changed to ---optical path---

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

*m. R. Sedighian*  
M.R. SEDI GHIAN  
Patent Examiner  
Art Unit: 2633

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